
ILLINOIS REGISTER

DEPARTMENT OF NATURAL RESOURCES

NOTICE OF PROPOSED AMENDMENT

- 1) Heading of the Part: The Illinois Oil and Gas Act
- 2) Code Citation: 62 Ill. Adm. Code 240
- 3) Section Number: 240.340 Proposed Action: Amendment
- 4) Statutory Authority: Implementing and authorized by the Illinois Oil and Gas Act [225 ILCS 725]
- 5) A Complete Description of the Subjects and Issues Involved: This rule is being amended to be compliant with Federal guidance. The proposed amendment regarding the Step-Rate Test has been changed to be consistent with Federal guidance and to protect drinkable water. The Step-Rate Test results will now be consistent with the other possible tests (frac-treatment and acid test) for formation integrity and will also no longer give a result that would damage the formation or endanger water supplies.
- 6) Published studies or reports, and sources of underlying data, used to compose this rulemaking: None
- 7) Will this rulemaking replace any emergency rulemaking currently in effect? Yes
- 8) Does this rulemaking contain an automatic repeal date? No
- 9) Does this rulemaking contain incorporations by reference? No
- 10) Are there any other proposed rulemakings pending on this Part? No
- 11) Statement of Statewide Policy Objective: This rulemaking does not affect units of local government.
- 12) Time, Place and Manner in which interested persons may comment on this proposed rulemaking: Comments on the proposed rulemaking may be submitted in writing for a period of 45 days following publication of this Notice to:

John Heidinger, Legal Counsel
Department of Natural Resources
One Natural Resources Way
Springfield IL 62702-1271

ILLINOIS REGISTER

DEPARTMENT OF NATURAL RESOURCES

NOTICE OF PROPOSED AMENDMENT

217/557-6379

- 13) Initial Regulatory Flexibility Analysis:
- A) Types of small businesses, small municipalities and not for profit corporations affected: None
 - B) Reporting, bookkeeping or other procedures required for compliance: None
 - C) Types of professional skills necessary for compliance: None
- 14) Regulatory Agenda on which this rulemaking was summarized: This rulemaking was not included on either of the two most recent agenda's because: The Department did not anticipate the need for this rulemaking at the time the agendas were published.

The full text of the Proposed Amendment begins on the next page:

ILLINOIS REGISTER

DEPARTMENT OF NATURAL RESOURCES

NOTICE OF PROPOSED AMENDMENT

TITLE 62: MINING

CHAPTER I: DEPARTMENT OF NATURAL RESOURCES

PART 240

THE ILLINOIS OIL AND GAS ACT

SUBPART A: GENERAL PROVISIONS

| Section | |
|---------|--|
| 240.10 | Definitions |
| 240.20 | Prevention of Waste (Repealed) |
| 240.30 | Jurisdiction (Repealed) |
| 240.40 | Enforcement of Act (Repealed) |
| 240.50 | Delegation of Authority (Repealed) |
| 240.60 | Right of Inspection (Repealed) |
| 240.70 | Right of Access (Repealed) |
| 240.80 | Sworn Statements (Repealed) |
| 240.90 | Additional Reports (Repealed) |
| 240.100 | When Rules Become Effective (Repealed) |
| 240.110 | Notice of Rules (Repealed) |
| 240.120 | Forms (Repealed) |
| 240.125 | Notice |
| 240.130 | Hearings – Notices (Repealed) |
| 240.134 | Lease Validation Petitions |
| 240.135 | Falsification or Misstatement of Information |
| 240.131 | Unitization Hearings |
| 240.132 | Integration Hearings |
| 240.133 | Hearings to Establish Pool-Wide Drilling Units |
| 240.140 | Violations Not Requiring Formal Action |
| 240.150 | Notice of Violation |
| 240.155 | Civil Complaint |
| 240.160 | Director's Decision |
| 240.170 | Cessation Order (Repealed) |
| 240.180 | Enforcement Hearings and Enforcement Cessation Orders |
| 240.185 | Cessation of Oil Production Operations |
| 240.186 | Cessation of Conditions Creating an Imminent Danger to Public Health and Safety and the Environment |
| 240.190 | Temporary Relief Hearings |
| 240.195 | Subpoenas |

ILLINOIS REGISTER

DEPARTMENT OF NATURAL RESOURCES

NOTICE OF PROPOSED AMENDMENT

SUBPART B: PERMIT APPLICATION PROCEDURES FOR PRODUCTION WELLS

Section

| | |
|---------|--|
| 240.200 | Applicability |
| 240.210 | Application for Permit to Drill, Deepen or Convert to a Production Well |
| 240.220 | Contents of Application |
| 240.230 | Authority of Person Signing Application |
| 240.240 | Additional Requirements for Directional Drilling |
| 240.245 | Additional Requirements for Horizontal Drilling |
| 240.250 | Issuance of Permit to Drill or Operate |
| 240.251 | Revocation of Permit to Drill |
| 240.255 | Conversion of a Production Well to a Water Well |
| 240.260 | Change of Well Location |
| 240.270 | Application for Approval of Enhanced Recovery Injection and Disposal Operations (Repealed) |
| 240.280 | Duration of Underground Injection Well Orders (Repealed) |

SUBPART C: PERMIT APPLICATION PROCEDURES FOR CLASS II UIC WELLS

Section

| | |
|---------|---|
| 240.300 | Applicability |
| 240.305 | Transfer of Management (Recodified) |
| 240.310 | Application for Permit to Drill, Deepen, or Convert or Amend to a Class II UIC Well |
| 240.311 | Application for Freshwater Aquifer Exemption |
| 240.312 | Freshwater Aquifer Exemptions |
| 240.320 | Contents of Application |
| 240.330 | Authority of Person Signing Application |
| 240.340 | Proposed Well Construction and Operating Parameters |
| 240.350 | Groundwater and Potable Water Supply Information |
| 240.360 | Area of Review |
| 240.370 | Public Notice |
| 240.380 | Issuance of Permit |
| 240.385 | Conversion of a Class II Well to a Water Well |
| 240.390 | Permit Amendments |
| 240.395 | Update of Class II UIC Well Permits Issued Prior to July 1, 1987 |

SUBPART D: SPACING OF WELLS

Section

ILLINOIS REGISTER

DEPARTMENT OF NATURAL RESOURCES

NOTICE OF PROPOSED AMENDMENT

| | |
|---------|--|
| 240.400 | Definitions |
| 240.410 | Drilling Units |
| 240.420 | Well Location Exceptions within Drilling Unit |
| 240.430 | Drilling Unit Exceptions |
| 240.440 | More Than One Well on a Drilling Unit |
| 240.450 | Directional Drilling |
| 240.455 | Horizontal Drilling |
| 240.460 | Modified Drilling Unit |
| 240.465 | Special Drilling Unit |
| 240.470 | Establishment of Pool-Wide Drilling Units Based Upon Reservoir Characteristics |

SUBPART E: WELL DRILLING,
COMPLETION AND WORKOVER REQUIREMENTS

| | |
|---------|--|
| Section | |
| 240.500 | Definitions |
| 240.510 | Department Permit Posted |
| 240.520 | Drilling Fluid Handling and Storage |
| 240.525 | Saltwater or Oil Based Drilling Fluid Handling and Storage |
| 240.530 | Completion Fluid and Completion Fluid Waste Handling and Storage |
| 240.540 | Drilling and Completion Pit Restoration |
| 240.550 | Disposal of General Oilfield Wastes and Other Wastes |

SUBPART F: WELL CONSTRUCTION, OPERATING AND REPORTING
REQUIREMENTS FOR PRODUCTION WELLS

| | |
|---------|---|
| Section | |
| 240.600 | Applicability |
| 240.605 | Drilled Out Plugged Hole (DOPH) Notification |
| 240.610 | Construction Requirements for Production Wells |
| 240.620 | Remedial Cementing of Leaking Wells |
| 240.630 | Operating Requirements |
| 240.640 | Reporting Requirements |
| 240.650 | Confidentiality of Well Data |
| 240.655 | Mechanical Integrity Testing for Class II Injection Wells (Repealed) |
| 240.660 | Monitoring and Reporting Requirements for Enhanced Recovery Injection and Disposal Wells (Repealed) |
| 240.670 | Avoidable Waste of Gas (Repealed) |
| 240.680 | Escape of Unburned Gas Prohibited (Repealed) |

ILLINOIS REGISTER

DEPARTMENT OF NATURAL RESOURCES

NOTICE OF PROPOSED AMENDMENT

SUBPART G: WELL CONSTRUCTION, OPERATING
AND REPORTING REQUIREMENTS FOR CLASS II UIC WELLS

| | |
|---------|---|
| Section | |
| 240.700 | Applicability and Definitions |
| 240.710 | Surface and Production Casing Requirements for Newly Drilled Class II UIC Wells |
| 240.720 | Surface and Production Casing Requirements for Conversion to Class II UIC Wells |
| 240.730 | Surface and Production Casing Requirements for Existing Class II UIC Wells |
| 240.740 | Other Construction Requirements for Class II UIC Wells |
| 240.750 | Operating Requirements for Class II UIC Wells |
| 240.760 | Establishment of Internal Mechanical Integrity for Class II UIC Wells |
| 240.770 | Establishment of External Mechanical Integrity for Class II UIC Wells |
| 240.780 | Reporting Requirements for Class II UIC Wells |
| 240.790 | Confidentiality of Well Data |
| 240.795 | Commercial Saltwater Disposal Well |
| 240.796 | Operating and Reporting Requirements, Hydraulic Fracturing Operations, Seismicity |

SUBPART H: LEASE OPERATING REQUIREMENTS

| | |
|---------|---|
| Section | |
| 240.800 | Definitions |
| 240.805 | Lease and Well Identification |
| 240.810 | Tanks, Tank Batteries and Containment Dikes |
| 240.815 | Permanent Well Site Equipment Setback |
| 240.820 | Flowlines |
| 240.830 | Power Lines |
| 240.840 | Equipment Storage |
| 240.850 | Concrete Storage Structures |
| 240.860 | Pits |
| 240.861 | Existing Pit Exemption For Continued Production Use |
| 240.862 | Existing Pit Exemption For Alternative Use |
| 240.870 | Leaking Unpermitted Drill Hole |
| 240.875 | Leaking Previously Plugged Well |
| 240.880 | Initial Spill Notification |
| 240.890 | Crude Oil Spill Remediation Requirements |
| 240.891 | Crude Oil Spill Waste Disposal and Remediation |
| 240.895 | Produced Water Spill Remediation Requirements |

ILLINOIS REGISTER

DEPARTMENT OF NATURAL RESOURCES

NOTICE OF PROPOSED AMENDMENT

SUBPART I: LIQUID OILFIELD WASTE HANDLING AND DISPOSAL

| | |
|---------|---|
| Section | |
| 240.900 | Definitions |
| 240.905 | Application for Permit to Operate a Liquid Oilfield Waste Transportation System |
| 240.906 | Application for a Liquid Oilfield Waste Transportation Vehicle Permit |
| 240.910 | Inspection of Vehicles (Tanks) |
| 240.920 | Issuance of Liquid Oilfield Waste Transportation System and Vehicle Permits |
| 240.925 | Liquid Oilfield Waste Recordkeeping Requirements |
| 240.926 | Liquid Oilfield Waste Transportation System and Vehicle Operating Requirements |
| 240.930 | Produced Water |
| 240.940 | Crude Oil Bottom Sediments |
| 240.945 | Lease Road Oiling |
| 240.950 | Crude Oil Spill Waste Disposal (Repealed) |
| 240.960 | Oil Field Brine Hauling Permit Conditions (Repealed) |
| 240.970 | Inspection of Vehicles (Repealed) |
| 240.980 | Transfer of Permits (Repealed) |
| 240.985 | Revocation of Oil Field Brine Hauling Permit (Repealed) |
| 240.990 | Records and Reporting Requirements (Repealed) |
| 240.995 | Bonds – Blanket Surety Bond (Repealed) |

SUBPART J: VACUUM

| | |
|----------|---|
| Section | |
| 240.1000 | Definitions |
| 240.1005 | Applicability |
| 240.1010 | Application for Vacuum Permit |
| 240.1020 | Contents of Application |
| 240.1030 | Authority of Person Signing Application |
| 240.1040 | Notice and Hearing |
| 240.1050 | Issuance of Permit |
| 240.1060 | Permit Amendments |

SUBPART K: PLUGGING OF WELLS

| | |
|----------|---|
| Section | |
| 240.1105 | Plugging of Non-Productive Wells (Repealed) |
| 240.1110 | Definitions |

ILLINOIS REGISTER

DEPARTMENT OF NATURAL RESOURCES

NOTICE OF PROPOSED AMENDMENT

| | |
|----------|---|
| 240.1115 | Plugging Responsibility |
| 240.1120 | Plugging of Uncased Wells |
| 240.1130 | Plugging and Temporary Abandonment of Inactive Production Wells |
| 240.1131 | Extension of Future Use Status for Production Wells (Repealed) |
| 240.1132 | Plugging and Temporary Abandonment of Inactive Class II UIC Wells |
| 240.1140 | General Plugging Procedures and Requirements |
| 240.1150 | Specific Plugging Procedures |
| 240.1151 | Procedures for Plugging Coal Seams |
| 240.1160 | Plugging Fluid Handling and Storage |
| 240.1170 | Plugging Fluid Waste Disposal and Well Site Restoration |
| 240.1180 | Lease Restoration |
| 240.1181 | Lease Restoration Requirements (Repealed) |
| 240.1190 | Filing Plugging Report |

SUBPART L: REQUIREMENTS FOR OTHER TYPES OF WELLS

| | |
|----------|--|
| Section | |
| 240.1200 | Applicability |
| 240.1205 | Application for Permit to Drill a Test Well or Drill Hole |
| 240.1210 | Contents of Application for Permit to Drill or Convert to an Observation, Gas Storage Well or Service Well (Repealed) |
| 240.1220 | Contents of Application for Coal Test Hole, Mineral Test Hole, Structure Test Hole, or Coal or Mineral Groundwater Monitoring Well |
| 240.1230 | Authority of Person Signing Application |
| 240.1240 | Issuance of Permit |
| 240.1250 | When Wells Shall Be Plugged and Department Notification |
| 240.1260 | Plugging and Restoration Requirements |
| 240.1270 | Confidentiality |
| 240.1280 | Converting to Water Well |

SUBPART M: PROTECTION OF WORKABLE COAL BEDS

| | |
|----------|---|
| Section | |
| 240.1300 | Introduction |
| 240.1305 | Permit Requirements in Mine Areas |
| 240.1310 | Workable Coal Beds Defined |
| 240.1320 | Mining Board may Determine Presence of Coal Seams |
| 240.1330 | Well Locations Prohibited |
| 240.1340 | Notice to Mining Board |
| 240.1350 | Casing and Protective Work |

ILLINOIS REGISTER

DEPARTMENT OF NATURAL RESOURCES

NOTICE OF PROPOSED AMENDMENT

| | |
|----------|---|
| 240.1360 | Operational Requirements Over Active Mine |
| 240.1370 | Inspection of Vehicles (Recodified) |
| 240.1380 | Transfer of Permits (Recodified) |
| 240.1385 | Revocation of Oil Field Brine Hauling Permit (Recodified) |
| 240.1390 | Records and Reporting Requirements (Recodified) |
| 240.1395 | Bonds – Blanket Surety Bond (Recodified) |

SUBPART N: ISSUANCE OR TRANSFER OF PERMIT TO OPERATE

| | |
|----------|--|
| Section | |
| 240.1400 | Definitions |
| 240.1405 | Transfer of Management (Repealed) |
| 240.1410 | Applicability |
| 240.1420 | Notification |
| 240.1425 | Authority of Person Signing Transfer Notification |
| 240.1430 | Responsibilities of Current Permittee |
| 240.1440 | Responsibilities of New Permittee or Proposed New Permittee |
| 240.1450 | Authority of Persons Signing Notification |
| 240.1460 | Conditions for and Effect of Issuance or Transfer of Permit to Operate |
| 240.1465 | Condition for and Effect of Transfer of PRF Wells |
| 240.1470 | Revocation of Permit to Operate |
| 240.1480 | Involuntary Transfer |
| 240.1485 | Administrative Record Correction |
| 240.1490 | Transfer Hearings |

SUBPART O: BONDS

| | |
|----------|---|
| Section | |
| 240.1500 | When Required, Amount and When Released |
| 240.1510 | Definitions |
| 240.1520 | Bond Requirements |
| 240.1530 | Forfeiture of Bonds |

SUBPART P: WELL PLUGGING AND RESTORATION PROGRAM

| | |
|----------|--|
| Section | |
| 240.1600 | Definitions |
| 240.1610 | Plugging Leaking or Abandoned Wells |
| 240.1620 | Plugging Orphaned Wells |
| 240.1625 | Plugging Abandoned Wells Through Landowner Grant |

ILLINOIS REGISTER

DEPARTMENT OF NATURAL RESOURCES

NOTICE OF PROPOSED AMENDMENT

| | |
|----------|--|
| 240.1630 | Emergency Well Plugging, Emergency Repair Work, Emergency Projects |
| 240.1635 | Emergency Well Plugging and Emergency Project Reimbursement |
| 240.1640 | Repayment of Funds |
| 240.1650 | Authorization for a Permittee to Operate Its Wells Placed into the Plugging and Restoration Fund Program for Abandonment |
| 240.1660 | Authorization for a Permittee to Operate Its Wells Placed into the Plugging and Restoration Fund Program for Non-Payment of Annual Well Fees |

SUBPART Q: ANNUAL WELL FEES

| | |
|----------|--------------------------------|
| Section | |
| 240.1700 | Fee Liability |
| 240.1705 | Amount of Assessment |
| 240.1710 | Annual Permittee Reporting |
| 240.1720 | When Annual Well Fees are Due |
| 240.1730 | Opportunity to Contest Billing |
| 240.1740 | Delinquent Permittees |

SUBPART R: REQUIREMENTS IN UNDERGROUND GAS STORAGE FIELDS
AND FOR GAS STORAGE AND OBSERVATION WELLS

| | |
|----------|---|
| Section | |
| 240.1800 | Applicability |
| 240.1805 | Definitions |
| 240.1810 | Submission of Underground Gas Storage Field Map |
| 240.1820 | Permit Requests in a Underground Gas Storage Field |
| 240.1830 | Application for Permit to Drill or Convert Wells |
| 240.1835 | Content of Application for Permit to Drill or Convert to an Observation or Gas Storage Well |
| 240.1840 | Authority of Person Signing Application |
| 240.1850 | Issuance of Permit |
| 240.1852 | Gas Storage and Observation Well, Construction, Operating and Reporting Requirements |
| 240.1855 | Well Drilling Completion and Workover Requirements |
| 240.1860 | Storage Field Operating Requirements |
| 240.1865 | Liquid Oilfield Waste Disposal |
| 240.1870 | Plugging of Gas Storage and Observation Wells |

SUBPART S: REQUIREMENTS FOR SERVICE WELLS

ILLINOIS REGISTER

DEPARTMENT OF NATURAL RESOURCES

NOTICE OF PROPOSED AMENDMENT

Section

| | |
|----------|---|
| 240.1900 | Applicability |
| 240.1905 | Application for Permit to Drill or Convert to Other Types of Wells or Drill Holes |
| 240.1910 | Contents of Application for Permit to Drill or Convert to a Service Well |
| 240.1920 | Authority of Person Signing Application |
| 240.1930 | Issuance of Permit |
| 240.1940 | When Wells Shall Be Plugged and Department Notification |
| 240.1950 | Plugging and Restoration Requirements |
| 240.1960 | Converting to Water Well |

AUTHORITY: Implementing and authorized by the Illinois Oil and Gas Act [225 ILCS 725].

SOURCE: Adopted November 7, 1951; emergency amendment at 6 Ill. Reg. 903, effective January 15, 1982, for a maximum of 150 days; amended at 6 Ill. Reg. 5542, effective April 19, 1982; codified at 8 Ill. Reg. 2475; amended at 11 Ill. Reg. 2818, effective January 27, 1987; amended at 14 Ill. Reg. 2317, effective January 25, 1990; recodified at 14 Ill. Reg. 3053; amended at 14 Ill. Reg. 13620, effective August 8, 1990; amended at 14 Ill. Reg. 20427, effective January 1, 1991; amended at 15 Ill. Reg. 2706, effective January 31, 1991; recodified at 15 Ill. Reg. 8566; recodified at 15 Ill. Reg. 11641; emergency amendment at 15 Ill. Reg. 14679, effective September 30, 1991, for a maximum of 150 days; amended at 15 Ill. Reg. 15493, effective October 10, 1991; amended at 16 Ill. Reg. 2576, effective February 3, 1992; amended at 16 Ill. Reg. 15513, effective September 29, 1992; expedited correction at 16 Ill. Reg. 18859, effective September 29, 1992; emergency amendment at 17 Ill. Reg. 1195, effective January 12, 1993, for a maximum of 150 days; amended at 17 Ill. Reg. 2217, effective February 8, 1993; amended at 17 Ill. Reg. 14097, effective August 24, 1993; amended at 17 Ill. Reg. 19923, effective November 8, 1993; amended at 18 Ill. Reg. 8061, effective May 13, 1994; emergency amendment at 18 Ill. Reg. 10380, effective June 21, 1994, for a maximum of 150 days; amended at 18 Ill. Reg. 16361, effective November 18, 1994; amended at 19 Ill. Reg. 10981, effective July 14, 1995; amended at 21 Ill. Reg. 7164, effective June 3, 1997; emergency amendment at 22 Ill. Reg. 988, effective December 22, 1997, for a maximum of 150 days; amended at 22 Ill. Reg. 8422, effective April 28, 1998; amended at 22 Ill. Reg. 8845, effective April 28, 1998; amended at 22 Ill. Reg. 22314, effective December 14, 1998; amended at 25 Ill. Reg. 9045, effective July 9, 2001; amended at 35 Ill. Reg. 13281, effective July 26, 2011; amended at 38 Ill. Reg. 18717, effective August 29, 2014; amended at 38 Ill. Reg. 22052, effective November 14, 2014; amended at 40 Ill. Reg. 7051, effective April 22, 2016; expedited correction at 40 Ill. Reg. 11042, effective April 22, 2016; emergency amendment at 40 Ill. Reg. 13265, effective September 1, 2016, for a maximum of 150 days; amended at 41 Ill. Reg. _____, effective _____.

SUBPART C: PERMIT APPLICATION PROCEDURES FOR CLASS II UIC WELLS

ILLINOIS REGISTER

DEPARTMENT OF NATURAL RESOURCES

NOTICE OF PROPOSED AMENDMENT

Section 240.340 Proposed Well Construction and Operating Parameters

- a) **Well Construction Records for Conversion Wells**
If the application is for the conversion of a previously drilled well, the applicant shall:
 - 1) submit a complete copy of all available geophysical logs run on the well; and
 - 2) submit a copy of the initial Completion Report or casing and cementing records of the well; and
 - 3) establish external mechanical integrity in accordance with Section 240.770(c).
- b) **Schematic Diagram**
The applicant shall submit a schematic diagram of the proposed injection well showing:
 - 1) the total depth and plugged back depth of the well;
 - 2) the sizes and depths of the holes drilled for the surface casing, mine or intermediate casing, and production casing;
 - 3) the sizes and depths of all casing in the well and any additional casing to be used in the well;
 - 4) the amount of cement used for each string of casing in the well and any additional cement to be used in the well;
 - 5) the size of the tubing and setting depth of the packer;
 - 6) the top and bottom depths of all perforated intervals in the casing; and
 - 7) the geologic name and the depth of the top and bottom of the proposed injection interval.
- c) **Proposed Injection Rate**
The applicant shall submit the proposed injection rate expressed in average barrels per day.

ILLINOIS REGISTER

DEPARTMENT OF NATURAL RESOURCES

NOTICE OF PROPOSED AMENDMENT

d) Injection Fluid

The applicant shall submit the depth and geologic name of the formations from which the injection fluid is to be obtained, a standard laboratory analysis of a representative sample of the fluid to be injected and the date the sample was obtained. The sample shall be analyzed for at least the following parameters: pH, Chloride, Total Dissolved Solids, and Specific Gravity. The sample shall be obtained and analyzed no earlier than one year prior to the date of filing of the application. If the injection fluid is other than water, the sample shall be analyzed for the chemical components and Specific Gravity of the fluid.

e) Proposed Maximum Injection Pressure

- 1) The applicant shall submit the proposed maximum injection pressure in accordance with the following formula:

$$MIP = (.80 - (.433 \times SG_{Sp.Gr.})) \times D_{Depth} - 14.7$$

Where:

M.I.P = maximum allowable injection pressure
(PSI)

$SG_{Sp.Gr.}$ = specific gravity of the injection fluid

D_{Depth} = depth of the top of the upper most injection interval (ft.)

- 2) If the proposed maximum injection pressure exceeds the amount calculated in accordance with subsection (e)(1), the applicant shall submit the most recent information showing that the proposed maximum injection pressure will not initiate or propagate fractures in the injection interval or overlying strata that could enable the injection fluid or the fluid in the injection interval to leave the permitted injection intervals. The types of information that will be considered acceptable by the Department include, but are not limited to:

- A) A copy of the ticket (record of each injection pressure and corresponding time) and pressure chart (injection pressure vs. time) from a "frac" or "acid" treatment in the injection interval in the proposed well, or from the same interval or a stratigraphically higher interval in from a well within 1 mile of the proposed well,

ILLINOIS REGISTER

DEPARTMENT OF NATURAL RESOURCES

NOTICE OF PROPOSED AMENDMENT

that shows the Instantaneous Shut-In Pressure (ISIP). The shut-down pressure, instantaneous shut-in pressure, and 5-minute shut down pressure must be obtained, read and recorded. The maximum allowable injection pressure shall be 10% less than the ISIP measured at the surface unless the specific gravity of the treatment fluid is less than the specific gravity of the proposed injection fluid, in that case the ISIP shall be measured at the injection interval.

- B) The results of a step rate test, both ticket (record of each injection rate and the corresponding pressure and time) and chart (injection rate and resulting pressure vs. time), from the injection interval in the proposed well, or from the same interval or a stratigraphically higher interval in a well within 1 mile of the proposed well ~~that shows that the proposed maximum injection pressure will not propagate fractures allowing the injection fluid to migrate out of the permitted injection interval.~~ The maximum allowable injection pressure shall be 10% less than the ISIP pressure, measured at the surface if the formation fracture pressure was exceeded during the test or an existing fracture was opened. In the event the formation fracture pressure was not exceeded and an existing fracture was not opened, the maximum allowable injection pressure shall be the highest step pressure recorded during the step rate test, at which the formation broke during the test. A step rate test shall at a minimum include the following:

- i) A statement specifying the length of the shut in period. Prior to testing, shut in the well long enough so that the bottom-hole pressure approximates shut in formation pressure.~~A zero injection rate (pressure stabilizing) step, at least three rate steps of equal length below the fracture opening pressure and at least two rate steps above the fracture opening pressure. The rate of increase for each step following fracture opening shall be at least 120 percent of the preceding rate. Each step shall be at least 4 minutes in length.~~
- ii) Measurement of at least six rate steps recording the injection rate, pressure, and elapsed time of each.

ILLINOIS REGISTER

DEPARTMENT OF NATURAL RESOURCES

NOTICE OF PROPOSED AMENDMENT

- iii) An initial zero injection rate (pressure stabilizing) step.
- iv) Each rate step after the zero injection rate step shall be at least 120 percent of the preceding rate.
- v) Each rate step shall be of equal length and of at least 4 minutes in duration.
- vi) At least three rate steps below the formation fracture pressure are required; if the formation fracture pressure was not exceeded and an existing fracture was not opened, at least five rate steps are required.
- vii) If the formation fracture pressure was exceeded, at least two rate steps above the formation fracture pressure are required.
- viii) If an existing fracture is opened during the test, no further rate steps are required.
- ix) If the formation fracture pressure was exceeded or an existing fracture was opened, the shut-down pressure, instantaneous shut-in pressure and 5-minutes shut-down pressure must be obtained, read, and recorded.

The results of a step rate test shall be plotted on a graph with the pressure at the end of each step plotted against the injection rate at the end of the same step. Best fit lines shall be constructed using the points before and after fracture opening.

- xiii) If the Department has reason to believe induced fractures have occurred as a result of long term injection above the fracture pressure, the Department shall determine if the results of a step rate test are acceptable to permit the proposed maximum injection pressure.

- C) In the event the Department determines the information submitted under subsection (e)(2) is not acceptable, the Department will issue a deficiency letter. If a timely response is not received or the

ILLINOIS REGISTER

DEPARTMENT OF NATURAL RESOURCES

NOTICE OF PROPOSED AMENDMENT

response is determined inadequate, the MIP will be calculated
using the formula found in subsection (e)(1) above.

(Source: Amended at 41 Ill. Reg. _____, effective _____)